**AMENDMENTS TO THE CLAIMS:**

The Listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An optical fiber comprising:

a core; and

a cladding layer including a plurality of hydrophilic nano-particles ~~around~~ proximate the surface of the core~~, said cladding layer providing improved moisture resistance~~.

2. (Original) The optical fiber of claim 1, wherein the cladding layer includes a filler.

3. (Original) The optical fiber of claim 2, wherein the filler includes at least one of a polymer, synthetic oil, poly-siloxane and Teflon.

4. (Original) The optical fiber of claim 1, further including an overclad layer around the cladding layer.

5. (Previously Presented) The optical fiber of claim 4, wherein the overclad layer includes Teflon.

6. (Original) The optical fiber of claim 1, wherein the core is a silica glass core.

7. (Currently Amended) The optical fiber of claim 1, wherein the cladding layer includes nano-particles of at least one of a ceramic, silica, molybdenum disulfide, ~~Teflon~~ and a metallic oxide.

8. (Previously Presented) The optical fiber of claim 7, wherein the metallic oxide is one of titanium oxide, aluminum oxide and magnesium oxide.

9. (Cancelled)

10. (Currently Amended) The optical fiber of claim 1, wherein the cladding layer further comprises ~~nano-particles are a mix of hydrophilic and~~ hydrophobic nano-particles.

11. (Original) The optical fiber of claim 1, wherein the cladding layer includes a plurality of layers of nano-particles, the plurality of layers having different hydrophobicity characteristics.

12. (Original) The optical fiber of claim 1, wherein the cladding layer includes an inner layer of metallic oxide nano-particles and outer layer of silica nano-particles.

13. (Original) The optical fiber of claim 1, wherein the cladding layer includes an inner layer of molybdenum disulfide nano-particles and outer layer of Teflon.

14. (Original) The optical fiber of claim 1, wherein the cladding layer includes a resin foam.

15. (Original) The optical fiber of claim 1, wherein the cladding layer includes a thixotropic material.

16. (Currently Amended) An optical fiber bundle comprising:

a plurality of cores; and

a cladding layer including a plurality of hydrophilic nano-particles,

wherein the plurality of cores are embedded within the same cladding layer and the hydrophilic nano-particles are proximate the surface of the plurality of cores.

17. (Original) The optical fiber of claim 16, wherein the cladding layer includes a filler.

18. (Original) The optical fiber of claim 17, wherein the filler includes at least one of a polymer, synthetic oil, poly-siloxane and Teflon.

19. (Original) The optical fiber of claim 16, further including an overclad layer around the cladding layer.

20. (Currently Amended) The optical fiber of claim 16, wherein the cladding layer includes nano-particles of at least one of a ceramic, silica, ~~Teflon,~~ molybdenum disulfide and a metallic oxide.

21. (Currently Amended) The optical fiber of claim 16, wherein the cladding layer further comprises ~~nano-particles are a mix of hydrophilic and~~ hydrophobic nano-particles.

22. (Currently Amended) An optical transmission structure comprising:

a substrate;

a waveguide on the substrate; and

a cladding layer in direct contact with the waveguide and including a plurality of hydrophilic nano-particles over the waveguide~~, said nano-particles providing a lowered Young's modulus and increased moisture resistance~~.

23. (Original) The optical transmission structure of claim 22, wherein the cladding layer includes a filler.

24. (Original) The optical transmission structure of claim 23, wherein the filler includes at least one of a polymer, synthetic oil, poly-siloxane and Teflon.

25. (Original) The optical fiber of claim 22, wherein the nano-particles are formed of at least one of a ceramic, silica, Teflon, molybdenum disulfide and a metallic oxide.

26. (Currently Amended) An optical transmission structure comprising:

a substrate;

a plurality of waveguides stacked on the substrate; and

a cladding layer including a plurality of hydrophilic nano-particles over the waveguides and between the waveguides~~, said nano-particles providing a lowered Young's modulus and increased moisture resistance~~.

27. (Original) The optical transmission structure of claim 26, wherein the cladding layer includes a filler.

28. (Original) The optical transmission structure of claim 27, wherein the filler includes at least one of a polymer, synthetic oil, poly-siloxane and Teflon.

29. (Original) The optical transmission structure of claim 26, wherein the waveguides are silica glass waveguides.

30. (Currently Amended) The optical transmission structure of claim 26, wherein the nano-particles include at least one of a ceramic, silica, ~~Teflon,~~ molybdenum disulfide and a metallic oxide.

31. (Cancelled)

32. (Currently Amended) The optical transmission structure of claim 26, wherein the cladding layer further comprises ~~nano-particles are a mix of hydrophilic and~~ hydrophobic nano-particles.

33. (Currently Amended) A method of manufacturing a fiber structure comprising the steps of:

forming a fiber core; and

coating a fiber core with a cladding layer that includes hydrophilic nano-particles.

34. (Original) The method of claim 33, further including the step of forming an overclad layer over the cladding layer.

35. (Original) The method of claim 33, wherein the coating step forms an inner layer of nano-particles, and an outer layer of nano-particles, the inner and outer layers having dissimilar hydrophobicity.

36. (Original) The method of claim 35, wherein the coating step includes the step of negatively charging the fiber core, positively charging the inner layer, and negatively charging the outer layer.

37. (Previously Presented) The method of claim 35, wherein the inner layer includes metallic oxide nano-particles, and the outer layer includes silica nano-particles.

38. (Original) The method of claim 33, wherein the coating step includes the step of immersing the fiber structure in a water-alcohol medium that includes the nano-particles.

39. (Original) The method of claim 33, wherein the coating step includes the step of drying the fiber structure azeotropically.

40. (Original) The method of claim 33, wherein the coating step includes the step of drawing the fiber core through a paste that includes the nano-particles.

41. (Original) The method of claim 33, wherein the coating step includes the steps of:

applying a polymer with the nano-particles to the fiber core; and

drying the polymer.

42. (Original) The method of claim 33, wherein the coating step forms the cladding layer that includes a filler in which the nano-particles are embedded.

43. (Currently Amended) A method of manufacturing a light transmission structure comprising the steps of:

forming a waveguide on a substrate; and

forming a cladding layer on the waveguide, the cladding layer including hydrophilic nano-particles proximate the waveguide ~~a cladding layer including a plurality of nano-particles over the waveguide, said nano-particles providing a lowered Young's modulus and increased moisture resistance~~.

44. (New) An optical fiber comprising:

a core; and

a cladding layer including a plurality of nano-particles around the core, wherein the cladding layer includes an inner layer comprised of metallic oxide nano-particles and outer layer comprised of silica nano-particles.

45. (New) An optical fiber comprising:

a core; and

a cladding layer including a plurality of nano-particles around the core, wherein the cladding layer includes an inner layer comprised of molybdenum disulfide nano-particles and outer layer comprised of Teflon.

46. (New) A method of manufacturing a fiber structure comprising the steps of:

forming a fiber core; and

coating a fiber core with a cladding layer that contains nano-particles, comprising the steps of

forming an inner layer and an outer layer of nano-particles having dissimilar hydrophobicity; and

negatively charging the fiber core, positively charging the inner layer, and negatively charging the outer layer.

47. (New) A method of manufacturing a fiber structure comprising the steps of:

forming a fiber core; and

coating a fiber core with a cladding layer that includes nano-particles;

wherein the coating step forms an inner layer and an outer layer of nano-particles having dissimilar hydrophobicity, wherein the inner layer comprises metallic oxide nano-particles and the outer layer comprises silica nano-particles.

48. (New) An optical fiber comprising:

a core; and

a cladding layer having hydrophobic and hydrophilic nano-particles around the core.

49. (New) The optical fiber of claim 48, wherein the cladding layer further comprises a filler.

50. (New) The optical fiber of claim 49, wherein the filler is a thixotropic material.

51. (New) The optical fiber of claim 49, wherein the filler is hydrophobic.

52. (New) The optical fiber of claim 48, wherein the cladding layer has an inner region adjacent to the core and an outer region around the inner region; and

the inner region comprises the hydrophilic nano-particles and the outer region comprises the hydrophobic nano-particles.

54. (New) The optical fiber of claim 10, wherein the hydrophobic nano-particles are selected from the group consisting of silica and Teflon.

55. (New) The optical fiber of claim 1, wherein the hydrophilic nano-particles are in direct contact with the core.

56. (New) The optical fiber of claim 21, wherein the hydrophobic nano-particles are selected from the group consisting of silica and Teflon.

57. (New) The optical transmission structure of claim 32, wherein the hydrophobic nano-particles are selected from the group consisting of silica and Teflon.

58. (New) An optical fiber comprising:

a core;

a cladding layer around the core, the cladding layer comprising

a plurality of hydrophilic nano-particles forming an inner region of the cladding layer proximate the surface of the core; and

a plurality of hydrophobic nano-particles forming an outer region of the cladding layer.